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REMARKS

This is a full and timely response to the non-final Official Action mailed April 25, 2006. Reconsideration of the application in light of the above amendments and the following remarks is respectfully requested.

Claim Status:

Previously, claims 1-48 and 56-62 were withdrawn under a Restriction Requirement. Consequently, to expedite the prosecution of this application, Applicant has herein cancelled withdrawn claims 1-48 and 56-62. The withdrawn claims are cancelled without prejudice or disclaimer. Applicant reserves the right to file any number of continuation or divisional applications to the withdrawn claims or to any other subject matter described in the present application.

By the forgoing amendment, various remaining claims have been amended. Additionally, new claims 63-85 have been added. Thus, claims 49-55 and 63-85 are currently pending for further action.

Allowable Subject Matter:

In the recent Office Action, the Examiner held claim 52 to contain allowable subject matter and to be allowable if rewritten as an independent claim. Applicant wishes to thank the Examiner for this finding of allowable subject matter.

Accordingly, claim 52 has been amended herein and rewritten as an independent claim. Therefore, following entry of this amendment, claim 52 should be in condition for allowance as indicated by the Examiner.

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35 U.S.C. § 112, Second Paragraph:

In the recent Office Action, claims 51 and 54 were rejected under 35 U.S.C. § 112, second paragraph. Each of these rejections is addressed below.

Claim 51 was rejected under § 112 for reciting a feature with insufficient antecedent basis. This has been corrected by the present amendment. Therefore, following entry of this amendment, the rejection of claim 51 under § 112, second paragraph, should be reconsidered and withdrawn. This amendment to claim 51 does not, and is not intended to, narrow or change the scope of claim 51.

Claim 54 was rejected under § 112 because reciting "that the pre-ceramic is configured to produce a ceramic upon firing is not considered to be a structural limitation and is therefore vague and indefinite." (Action of 4/25/06, p. 2). Applicant respectfully disagrees.

Reciting that the pre-ceramic can be converted into a ceramic by firing defines the characteristics and, consequently, the structure of the pre-ceramic. There is nothing vague or indefinite about claim 54, one of skill in the art can readily determine its metes and bounds. Consequently, the rejection of claim 54 under § 112 should be reconsidered and withdrawn.

Prior Art:

Claims 49-51 and 53-55 were rejected as unpatentable under 35 U.S.C. § 103(a) over the combined teachings of U.S. Patent App. Pub. No. 20050197431 to Bredt ("Bredt") and

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U.S. Patent No. 5,952,093 to Nichols ("Nichols"). For at least the following reasons, this rejection is respectfully traversed.

Claim 49 recites:

A solid three-dimensional prototype composition, comprising:
multiple layers of pre-ceramic deposited in contact with one another, each of
said multiple layers of pre-ceramic comprising a particulate blend including a calcium
phosphate source;
wherein said particulate blend was hydrated by a solubilizing binder to
dissolve calcium phosphate of said calcium phosphate source in said particulate blend,
with precipitation of said calcium phosphate producing said pre-ceramic.

In contrast, the cited combination of prior art fails to teach or suggest the claimed particulate blend that includes a calcium phosphate source.

In this regard, the Office Action cites to Bredt at paragraph 0070. (Office Action of 4/25/06, p.3). However, this portion of Bredt teaches a particulate blend that includes calcium carbonate, *not* a calcium phosphate. A separate liquid solution of sodium hydrogen phosphate solution is then printed onto the powdered calcium carbonate. According to Bredt, "sodium hydrogen phosphate solution could be printed onto powdered calcium carbonate." (Bredt, paragraph 0070). Thus, Bredt fails teach or suggest the claimed layers of pre-ceramic that comprise a particulate blend including a calcium phosphate source.

Nichols also fails to teach or suggest the claimed layers of pre-ceramic that comprise a particulate blend including a calcium phosphate source. Consequently, adding the teachings of Nichols cannot remedy the deficiencies of the Bredt reference.

Thus, the combination of Bredt and Nichols fails to teach or suggest the claimed layers of pre-ceramic that comprise a particulate blend including a calcium phosphate source.

"To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA

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1974)." M.P.E.P. § 2143.03. Accord. M.P.E.P. § 706.02(j). For at least these reasons, the rejection of claims 49-51 and 53-55 should be reconsidered and withdrawn.

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Conclusion:

The newly added claims are thought to be patentable over the prior art of record for at least the same reasons given above with respect to original independent claim 49. Therefore, examination and allowance of the newly added claims is respectfully requested.

For the foregoing reasons, the present application is thought to be clearly in condition for allowance. Accordingly, favorable reconsideration of the application in light of these remarks is courteously solicited. If the Examiner has any comments or suggestions which could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the number listed below.

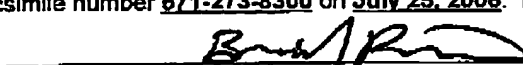
Respectfully submitted,

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<p style="text-align: center;">CERTIFICATE OF TRANSMISSION</p> <p>I hereby certify that this correspondence is being transmitted to the Patent and Trademark Office facsimile number <u>571-273-8300</u> on <u>July 25, 2006</u>. Number of Pages: <u>16</u></p> <p style="text-align: center;"> _____ Brian J. Riddle</p>
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